

Appl. No. 10/733,860
Response dated June 2, 2005
Reply to Office action of March 2, 2005

REMARKS

Claims 1-33 were considered in the Office action dated March 2, 2005. Claims 1-6, 10, 11, and 30-33 stand as rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Publication No. 2002/0154132 A1 (Dumesny *et al.*); claims 7-9 stand as rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesny *et al.* in view of U.S. Patent No. 6,707,458 B1 (Leather *et al.*); claims 23-28 stand as rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesny *et al.* in view of U.S. Patent No. 5,371,778 (Yanof *et al.*); claims 12-16, 18, and 20-22 stand as rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesny *et al.* in view of U.S. Patent No. 5,461,709 (Brown); and claim 29 stands as rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesny *et al.* in view of Yanof *et al.* and further in view of Brown.

The Office action states that claims 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant hereby requests entry of the Amendments to the Specification above in response to the objections to the Drawings under 37 CFR 1.84(p)(5). The drawings stand as objected to because the reference characters 2106, 2108, 2302, and 2622 from the drawings are not mentioned in the description. These reference characters were inadvertently left out of the description section. The reference character 2106 refers to the X-axis of the widget; 2108 refers to the Z-axis of the widget, 2302 refers to the Y-axis of the widget, and 2622 refers to a ghost image of the widget as it appeared at an initial click position. The Specification has been amended accordingly. Applicant contends the amendments are evident from the application as filed and that no new matter is added thereby. All amendments are supported in the specification as originally filed, including the drawings; for example, at paragraph [0169] on page 56 (ghost image disclosed), and in Figures 21A-C, 23A-C, and 26A-C. Applicant respectfully requests that the objections to the drawings be withdrawn in light of these amendments.

Independent claims 1, 10, 23, and 30 are amended as reflected in the Listing of Claims above. Also, dependent claim 21 is amended to correct a typographical error. The amendments are supported in the application as originally filed; no new matter is added thereby. For example, support for the amendments is found in the application in Figures 18A to 26C and at paragraphs [0164] to [0179], pages 53 to 63.

Claims 1-33 are pending following entry of this amendment and response.

Each of amended independent claims 1, 23, and 30 is patentable over the cited art.

Without conceding to the Office action rejections of the claims as filed, Applicant hereby amends independent claims 1, 23, and 30, as reflected in the Listing of Claims above. Each of these independent claims is amended to recite that the graphical user interface element is rendered in three-dimensional object space.

Appl. No. 10/733,860
Response dated June 2, 2005
Reply to Office action of March 2, 2005

None of the cited references, either alone or in combination, teach or suggest rendering a graphical user interface (GUI) element in three-dimensional object space, where the GUI element includes at least one active location for adjusting a texture. As described in the application, the fact that the GUI element is rendered in three-dimensional object space enhances user interactivity and permits intuitive usage of the GUI element to adjust mapped texture within a user-defined region on the surface of a 3D virtual object (see, for example, paragraph [0011] on page 3). Applicant contends the rejections of the claims are rendered moot because none of the cited references, alone or in combination, teach or suggest all the elements of any of the claims, as amended.

Cited reference Dumesny *et al.* presents an interactive GUI for manipulating a texture mapping (Figures 9A to 17J and paragraphs [0044] to [0073] of Dumesny *et al.*). The GUI of Dumesny *et al.* is in the form of a window with two regions – an object space region on the right and a texture space region on the left. The object space region on the right is a preview window that shows the result of a texture manipulation made by a user within the two-dimensional texture space region on the left (paragraphs [0044] and [0049] on page 4 of Dumesny *et al.*).

The GUI in Dumesny *et al.* is not an “element,” as is the widget of the present invention, but is instead a window with two regions. Furthermore, the GUI in Dumesny *et al.* is not “rendered in three-dimensional space,” because it is not an element that can be rendered *within* any particular space – the GUI in Dumesny *et al.* is a window that necessarily defines the boundary of a viewable space; it does not lie within a space. Finally, the GUI of Dumesny *et al.* does not provide or suggest “a GUI element rendered in three-dimensional object space comprising at least one active location for adjusting a texture,” as in the present invention, because the GUI of Dumesny *et al.* does not provide any active location within 3D object space for adjusting a 2D texture. Rather, any manipulation of texture in Dumesny *et al.* is performed within texture space, while the object space region serves as a preview window.

None of the other cited references – Leather *et al.*, Yanof *et al.*, or Brown – teach or suggest rendering a graphical user interface (GUI) element in three-dimensional object space, where the GUI element includes at least one active location for adjusting a texture. Thus, each of the amended independent claims 1, 23, and 30 is patentable over all of the cited art. Likewise, because a dependent claim includes all the limitations of the independent claim from which it depends, Applicant asserts that dependent claims 2-9, 24-29, and 31-33 are patentable in light of the cited art.

Claim 10 and dependent claims 11-22 are patentable – none of the cited art teaches or suggests haptic feedback.

Independent claim 10, as well as dependent claims 11-22, are directed to a haptic graphical user interface element comprising at least one active location for adjusting a texture, “wherein the at least one active location is associated with haptic feedback.” Claims 10-22 are distinguished from the cited references because none of the references teach or suggest providing

Appl. No. 10/733,860
Response dated June 2, 2005
Reply to Office action of March 2, 2005

a haptic graphical user interface element, "wherein the at least one active location is associated with haptic feedback." None of the cited references teach or suggest haptic feedback at all.

Page 3 of the Office action refers to paragraph 43, lines 1-11 and paragraph 49 of Dumesny *et al.* stating that, "the [O]ffice interprets the user interface of Dumesny *et al.* equivalent to a 'haptic graphical user interface' because mouse movements determine the adjustment and selection of adjustment mode by clicking and/or dragging mouse functions."

However, clicking and dragging a mouse does not teach or suggest haptic feedback because there is no force being returned to the user. Clicking and dragging a mouse involves user application of force to a mouse in order to depress a button or drag it across a surface; there is no force returned to the user, i.e., a force constraining the user's movement, as in haptic feedback.

The present application describes embodiments in which various kinds of haptic force feedback are associated with one or more hotspots of a haptic graphical user interface element for adjusting texture (see, for example, paragraph [0044] on page 12 to paragraph [0050] on page 15 and paragraph [0136] on page 42 to paragraph [0179] on page 63). Haptic feedback provides a more user-friendly, more interactive process (see, for example, paragraph [0137] on page 43). For example, the application states in paragraph [0047] on page 14, "[f]orce feedback associated with the constraint helps guide the user and allows the user to physically sense the translation of the texture as it is being performed."

Furthermore, there is no suggestion in any of the cited references to associate haptic feedback with an active location for adjusting a texture. None of the cited references describe haptic feedback. Although Brown describes a "sweet spot" (column 9, lines 40-46), the constraint is only graphical. It is not a force that is felt by a user through the sense of touch, as is haptic feedback. Brown's "sweet spot" is not equivalent to a gravity well of claim 12 of the present application, for example, because the gravity well of claim 12 is haptic feedback that can be felt by a user.

Therefore, Applicant contends that independent claim 10 and its dependent claims 11-22 are patentable over the cited art.

CONCLUSION

In view of the foregoing, Applicant respectfully requests allowance of claims 1-33 in due course. The Examiner is hereby cordially invited to contact Applicant's undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Appl. No. 10/733,860
Response dated June 2, 2005
Reply to Office action of March 2, 2005

Respectfully submitted,

Date: June 2, 2005
Reg. No. 53,002

Tel. No.: (617) 570-1013
Fax No.: (617) 523-1231

1539733v1



William R. Haulbrook, Ph.D.
Attorney for Applicant
Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109
Goodwin Customer No. 051414